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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/506,458  | 09/01/2004  | Ho Sung Kim          | P/3653-10           | 9993             |
| 38107 7590 02/19/2008<br>PHILIPS INTELLECTUAL PROPERTY & STANDARDS<br>595 MINER ROAD<br>CLEVELAND, OH 44143 |             |                      |                     |                  |
| EXAMINER<br>ZEMEL, IRINA SOPHIA   |             |                      |                     |                  |
| ART UNIT  |             | PAPER NUMBER         |                     |                  |
| 1796  |             |                      |                     |                  |
| MAIL DATE   |             | DELIVERY MODE        |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/506,458

**Applicant(s)**

KIM, HO SUNG

**Examiner**

Irina S. Zemel

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,6 and 8-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,8-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/5508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Inventor's Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 2, 6 and 8-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly added limitations "such that a total void volume of said microspheres is greater than a total volume between the microspheres" is not supported by the specification as originally filed. The limitation regarding relative volume of microspheres and the volume between the microspheres, this limitation is not supported by either the specification or the originally filed drawings. The figure relied upon for the support is clearly marked as "diagrammatic" view and not a figure where all of the components are drawn to the scale. It is not possible from a diagrammatic view to assess the actual values for the claimed respective volumes as it is not clear what constitutes volumes in between the microspheres and what is the void volume of the microspheres (how thick are the walls) and also, as noted above, nothing is drawn to scale. In addition, the diagrammatic drawings are two-dimensional, which provides no information whatsoever regarding

actual packing of the microspheres with respect of the volume between the microspheres.

***Claim Rejections - 35 USC § 102/103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-2, 6-10 are rejected under 35 U.S.C. 103(a) as obvious over AU Patent Application 200151857 to De Toffol (hereinafter AU De Toffol) under 35 U.S.C. 103(a) as obvious over its US corresponding patent 6,476,087 to De Toffol (hereinafter US De Toffol).

The rejection stands as per reasons of record. Insofar as the limitation to the "said mold defining an opening in the bottom thereof", in the absence of any specific dimension of the "opening", the pores of the wicked mold disclosed by the reference define plural opening in the bottom of the mold (as well as any other part of the mold) through which the excess of liquid phase flows away from the mold. Any single pore in the molds disclosed in the reference that is located at the bottom, thus, clearly satisfies the claim limitation of "said mold defining an opening in the bottom thereof",

Insofar as the added limitation regarding microspheres floating to the top "such that a total void volume of said microspheres is greater than a total volume between the microspheres", this limitation, as discussed above, is not supported by the original specification. However, as discussed in the previous office actions, since the density of the foams disclosed in the reference is governed to a large extent by the volume of the

interstitial space or volume between the microspheres, varying the volume between the microspheres would have been obvious as varying a result effective variable, i.e., to achieve the foams of desired density.

### ***Response to Arguments***

Applicant's arguments filed 11-30-2007 have been fully considered but they are not persuasive.

The applicants argue that the examiner's position that the pores of wicked mold disclosed in the reference define plural opening is erroneous. Specifically, the applicants state that "If the Examiner is going to correlate the 'opening' noted in applicant's claim with the 'pores' in the wicked mold described in the cited reference(s), it must be taken into account that the reference mold must intrinsically contain such pores over its entire surface, i.e., at the top, bottom and sides and not just at the bottom of the mold. Thus, rather than being provided with "an opening" in the bottom of the mold, if one adopts the Examiner's interpretation, the mold described by the reference is provide with an almost uncountable 'plurality' of openings over its entire surface through which excess liquid phase may be passed. This is not just a difference in degree, therefore, from the claimed invention, it is a difference in kind." The examiner does not see anything erroneous in interpreting the reference in the way suggested by the applicants, i.e., that "the reference mold must intrinsically contain such pores over its entire surface, i.e., at the top, bottom and sides and not just at the bottom of the mold.". This seems to be the most logical interpretation of "wicked mold". However, this

interpretation is not inconsistent with the fact that being provided with more than one opening on the bottom still meets the limitation of "defining an opening in the bottom of the mold". There is nothing in the claims or, for that matter anywhere in the specification of the instant invention that defines a single opening (by either the dimensions or size) or, most importantly, there is nothing that precludes the mold from having what the applicants call "uncountable plurality of opening" anywhere in the mold. Thus, it is not seen how the claim "define the difference in kind", as all the claims require is a "mold defining an opening in the bottom thereof", without any other specific restriction of limitations to either the size or the number of this or additional openings.

The applicants further argue that the arrangement described by the applicants in claim 1 recite "a total void volume of said microspheres is greater than a total interstitial void volume defined by spaces between the microspheres" which is different from the arrangements disclosed by the reference where the invention is described as foams in which the interstitial void volume should be greater than the void volume of the microspheres. This argument was already addressed before. As stated before, even if such preferred embodiments are disclosed by DeToffol, this disclosure, in the examiner's opinion as previously discussed, does not constitute teaching away, rather it presents clear suggestion to vary the volume of interstitial voids to vary the foam density depending on the desired end use of the foam. Moreover, the teachings of DeToffol clearly refer to the voids contained in the spaces between the microspheres (see the illustrative examples describing respective volumes of microspheres, resin and voids), while in the instant specification there is no disclosure whatsoever regarding any

interstitial volume defined by the spaces between the microspheres (other than a two-dimensional drawing), or the total *void volume* of the microspheres, or their characteristics. Thus, it is not even clear what this limitation defines as no clear definition of "void volume of microspheres" is defined.

The invention is still considered to have been obvious from the disclosure of the cited references.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 1796

/Irina S. Zemel/

Primary Examiner, Art Unit 1796

Irina S. Zemel

Primary Examiner

Art Unit 1796

ISZ